

Claims:

Claims 1-21 are currently pending in the application. Claims 1, 2, 6, 7, 8, 9, 12, 13, 14, 16, 17, 19, and 20 have been amended. Claims 4, 5, 11, 18, and 21 have been canceled without prejudice to or disclaimer of the subject matter of these claims. Underlining indicates additions to a claim and strikeouts indicate deletions from a claim. With entry of these amendments, claims 1-3, 6-10, 12-17, and 19-20 will be pending in this application.

1.(currently amended) A method, comprising:

performing an inverse DCT upon data using processor executable instructions to generate a first result, having a first format including a sign bit, an integer portion, and a fractional portion, in a first color space; ~~and~~

converting the first result from the first format to a second format including an integer portion using conversion hardware; and

~~performing a conversion upon the first result using conversion hardware to generate a second result in a second color space~~ performing a color space conversion to generate a second result using the first result having the second format.

2.(currently amended) The method as recited in claim 1, wherein:

performing the color space conversion includes performing a matrix multiplication ~~for a color space conversion from the first color space to the second color space~~ to generate the second result in a second color space from the first result in a first color space and having the first format.

3.(original) The method as recited in claim 2, wherein:

performing the inverse DCT includes using a Winograd process.

4.(canceled)

5.(canceled)

6.(currently amended) The method as recited in claim 5 3, wherein:

the first ~~plurality of~~ format includes data elements each ~~include~~ having 16 bits;
 and
 the second ~~plurality of~~ format includes data elements each ~~include~~ having 8 bits.

7.(currently amended) The method as recited in claim 6, wherein:
 the fractional portion of the ~~first plurality of~~ data elements includes 5 bits; and
 the integer portion of the ~~first plurality of~~ data elements includes 8 bits.

8.(currently amended)The method as recited in claim 7, wherein:
 the first color space includes a ~~YCbCr~~ YCrCb color space; and
 the second color space includes a ~~an~~ an RGB color space.

9.(currently amended) A conversion apparatus, comprising:
 a formatting device arranged to receive decompressed data generated from the execution of processor executable instructions in a first format including a sign bit, an integer portion, and a fractional portion and configured to generate reformatted data from the decompressed data in a second format including an integer portion; and
 a color space converter configured to perform a color space conversion on the reformatted data.

10.(original) The conversion apparatus as recited in claim 9, wherein:
 the color space converter includes a configuration to perform the color space conversion using a matrix multiplication.

11.(canceled)

12.(currently amended) The conversion apparatus as recited in claim ~~11~~ 10, wherein:

the computer executable instructions include a configuration to generate the decompressed data by performing an inverse DCT using a Winograd process.

13.(currently amended) The conversion apparatus as recited in claim 12, wherein:

~~each of the first plurality of data elements~~ the first format includes 16 bits; and

~~each of the second plurality of data elements~~ the second format includes 8 bits.

14.(currently amended) The conversion apparatus as recited in claim 13, wherein:

the reformatted data includes ~~YCaCb~~ YCrCb color space data.

15.(original) The conversion apparatus as recited in claim 14, wherein:
the color space converter includes a configuration to convert the reformatted data to RGB color space data.

16.(currently amended) A data pipeline, comprising:

a processing device configured to execute instructions to compute an inverse DCT using a Winograd process to generate decompressed ~~YCaCb~~ YCrCb color space data in a first format including a sign bit, an integer portion, and a fractional portion;

a converter configured to change the ~~YCaCb~~ YCrCb color space data from the first format to a second format including an integer portion; and

a color space converter configured to generate RGB color space data from the ~~YCaCb~~ YCrCb color space data in the second format.

17.(currently amended) The data pipeline as recited in claim 16, wherein:

the ~~YCaCb~~ YCrCb color space data in the first format includes a first set of data elements each having 16 bits; and

the ~~YCaCb~~ YCrCb color space data in the second format includes a second set of data elements each having 8 bits.

18.(canceled)

19.(currently amended) The data pipeline as recited in claim 18, wherein:

the color space converter includes a configuration to generate RGB color space data from the ~~YCaCb~~ YCrCb color space data in the second format using a matrix multiplication.

20.(currently amended) An apparatus, comprising:

means for executing code to perform an inverse DCT to generate data in a first format including a sign bit, an integer portion, and a fractional portion;

means for converting the data in the first format to the data in a second format including an integer portion; and

means for performing a color space conversion on the data.

21.(canceled)